

Sustainable Construction – online paper session

Toward sustainable construction by acting with 3V approach on energy skills

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presented at



SEetheSkills' - actions toward sustainability of construction

Topics covered:

- ✓ Energy skills and Sustainable construction
- ✓ The novel 3V SEetheSkills' approach related to energy skills and project CURRENT state-of-the art
- ✓ Main findings and best practices in the field of energy skills on EU level
- ✓ Toward realization of the utmost project result, as a prerequisite of sustainable construction
- ✓ Announcing the launching of the **Integrated register of Energy skills**
- ✓ The value of energy skills – set as **the basestone of sustainable construction**

Rationale

- Energy efficiency
- Sustainable use of resources
- Waste reduction
- Environment preservation
- Designing efficiency



Energy skills

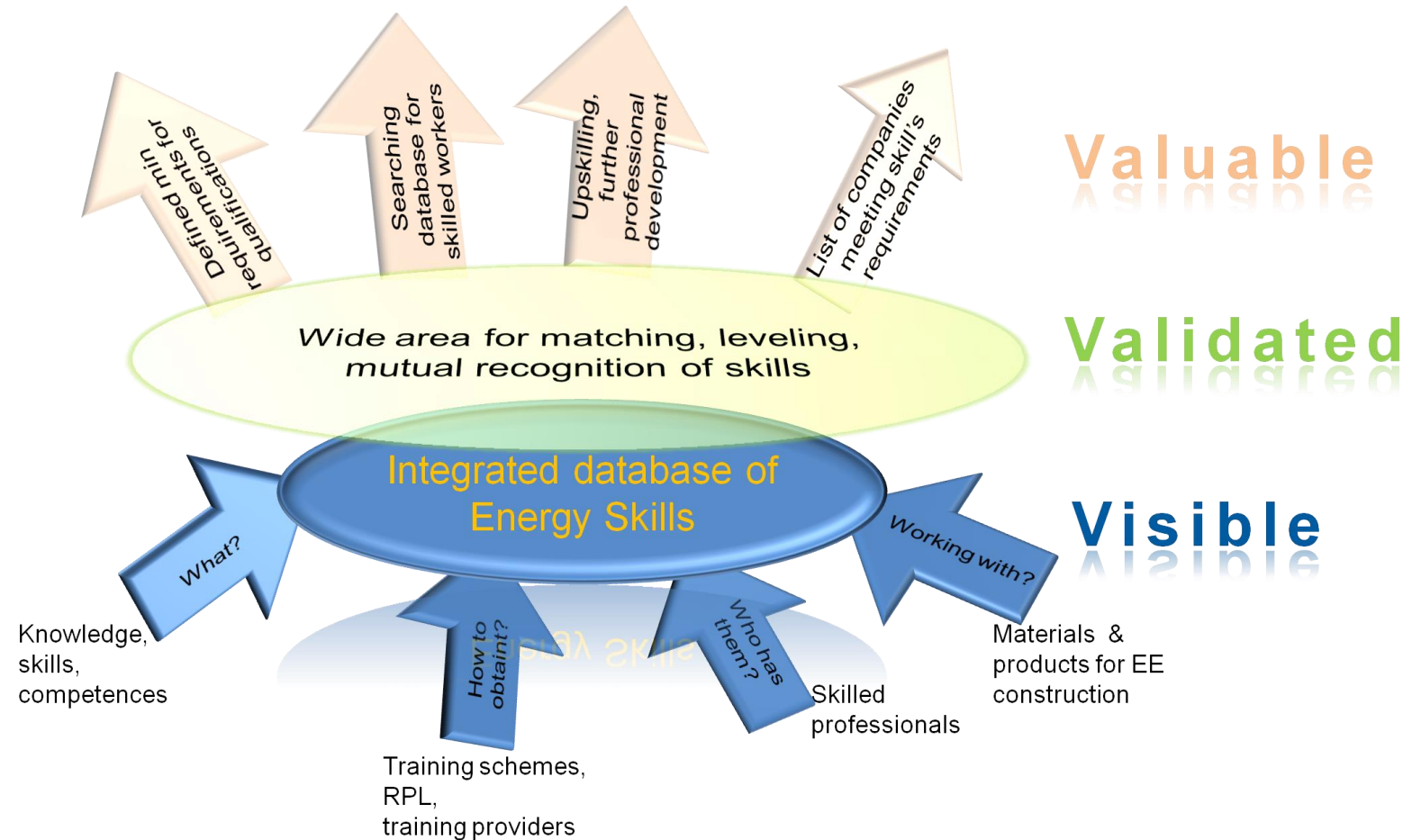
- Competent workforce
- Skilled and trained workers
- Qualified professionals
- Embraced innovations

Sustainable construction

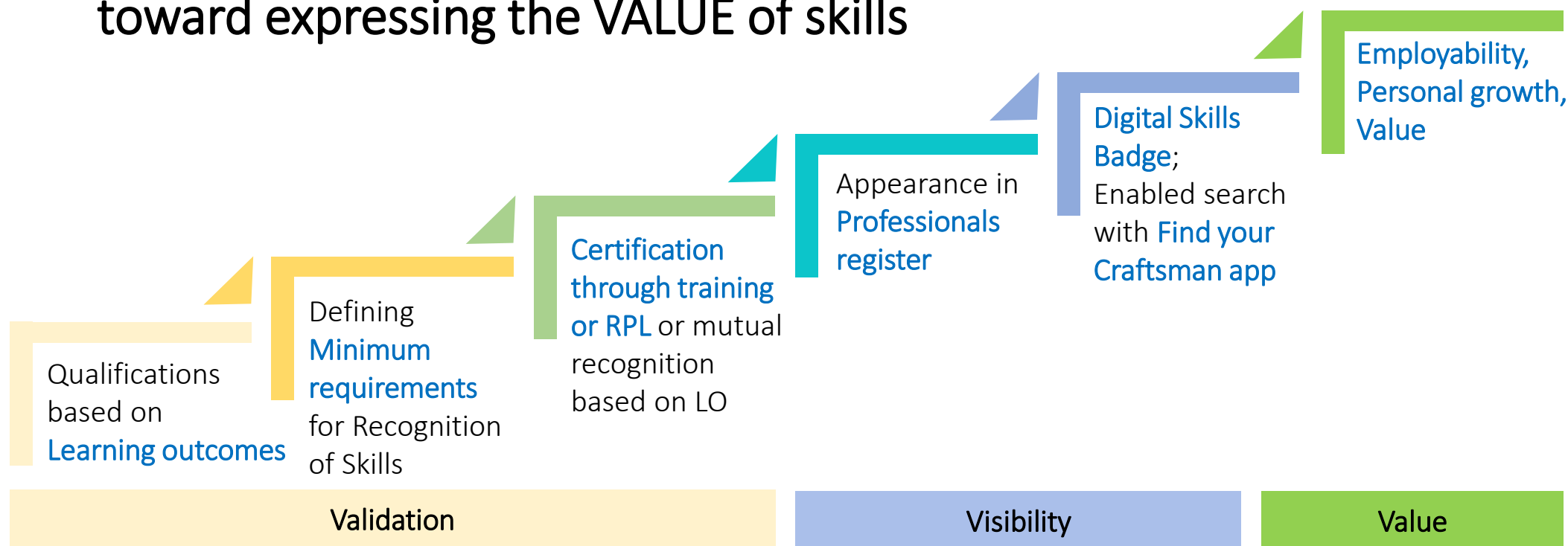
SEETheSkills 3V approach for raising the value of energy skills

Concept and approach

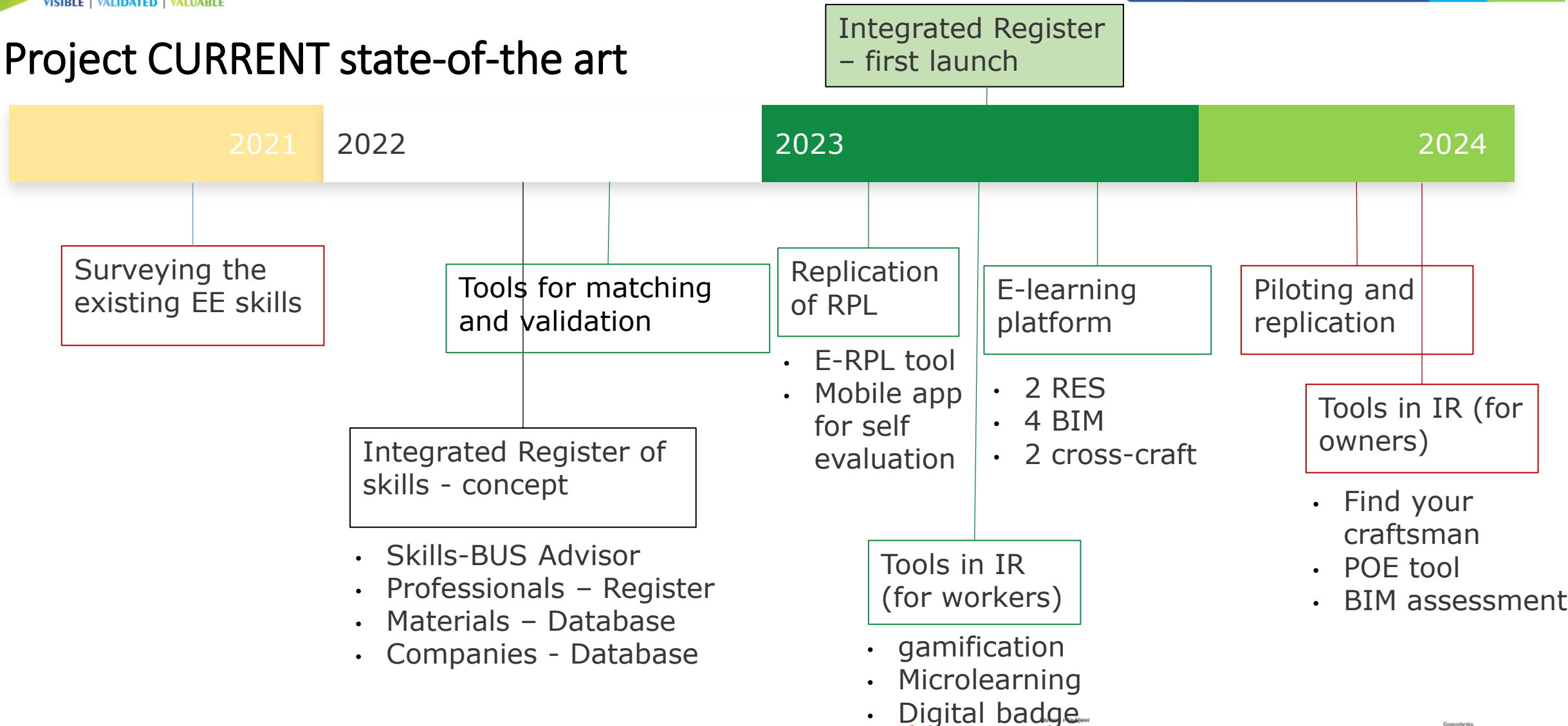
Creation of Integrated database of Energy skills to serve as a wide area for matching, leveling and mutual recognition of skills



SEETheSkills creates steps toward expressing the VALUE of skills



Project CURRENT state-of-the art

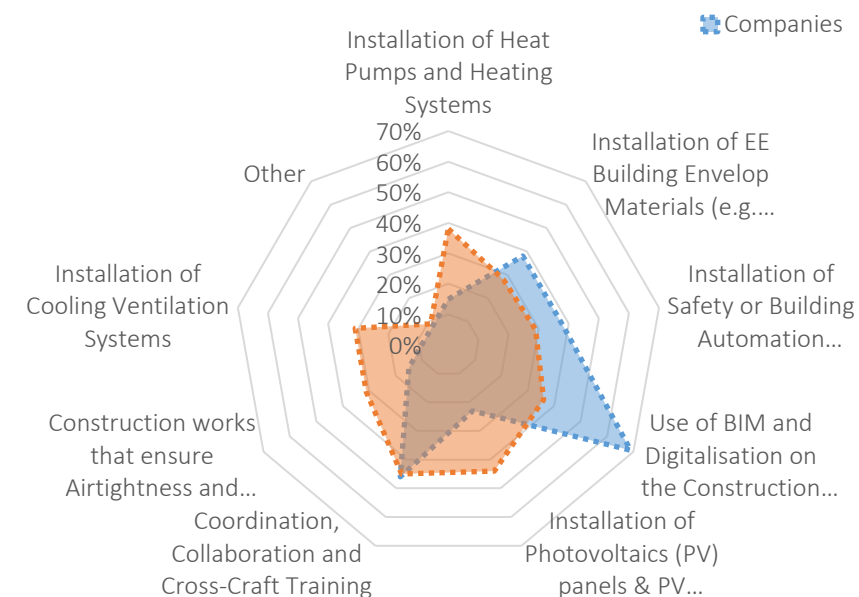


Main findings and best practices in the field of energy skills on EU level

1. EU survey on the status of EE skills

- Lack of registers of skilled person – the need for VISIBILITY
- Less than 25 % of respondents have some form of published (announced, visible) information about their EE skills
- Only 30 % of respondents have formal documents that certify their skills
- A share of 82% of the respondents have declared that have achieved their skills through the trainings organized by professional organisations
- Crucial actions are needed to increase the AWARENESS of the VALUE of skills
- When lacking EE and digital skills
 - Only 33% will reskills existing employed workers
 - Only 11% will redeploy existing workforce
 - More than 50 % will hire external experts (skilled professionals)

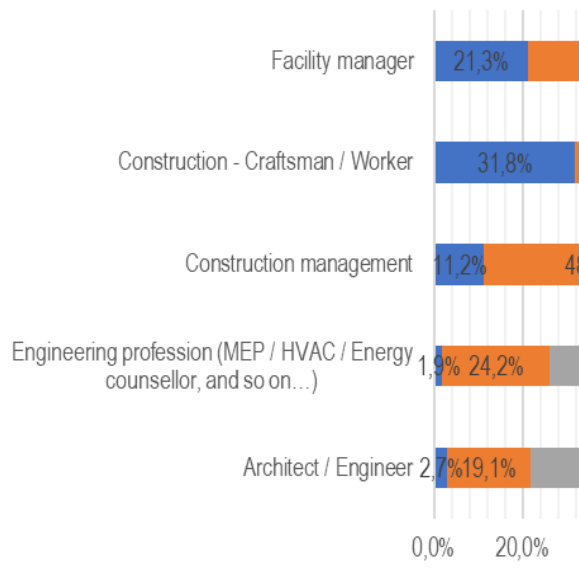
PRIORITISED TRAININGS



Main findings and best practices in the field of energy skills on EU level

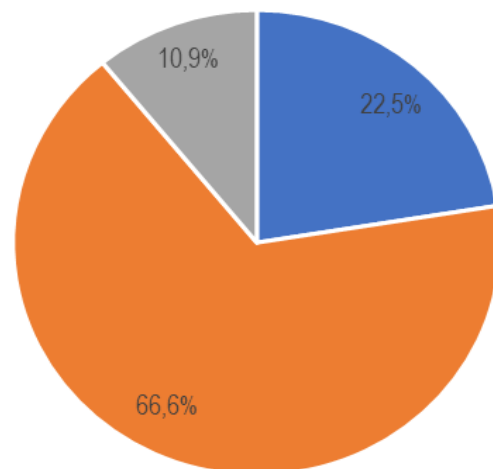
2. Report from on-line survey on awareness on energy skills – opinion of professionals

Who has the most impact to the future energy need of the building?



According to you, are there enough skilled professionals in the local market?

Are there enough possibilities for upskilling?

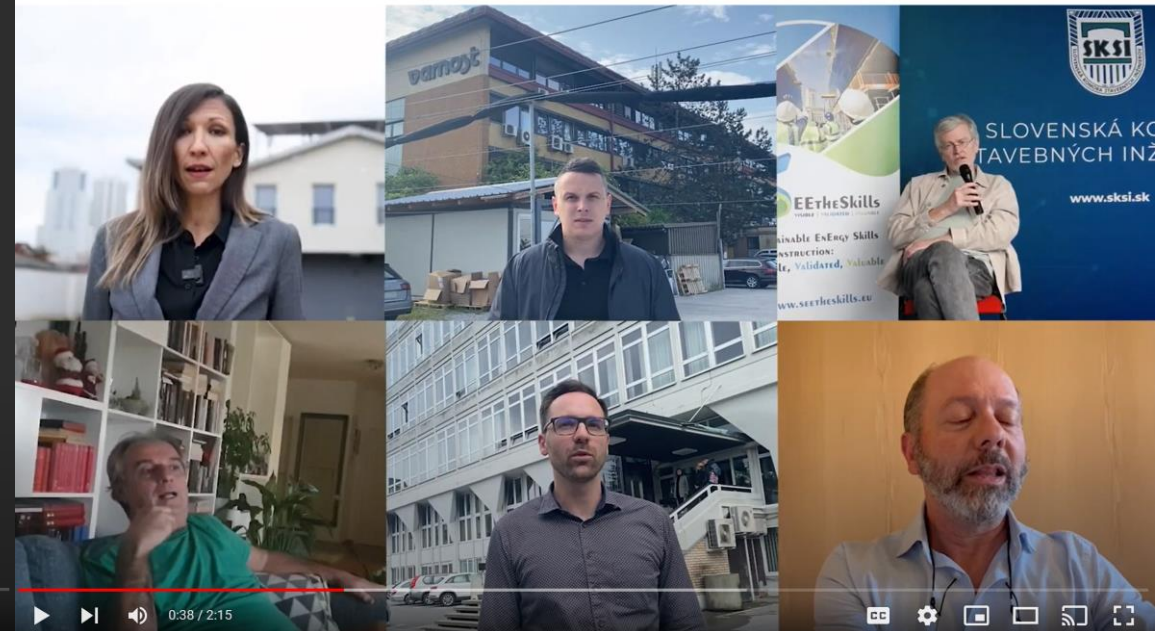
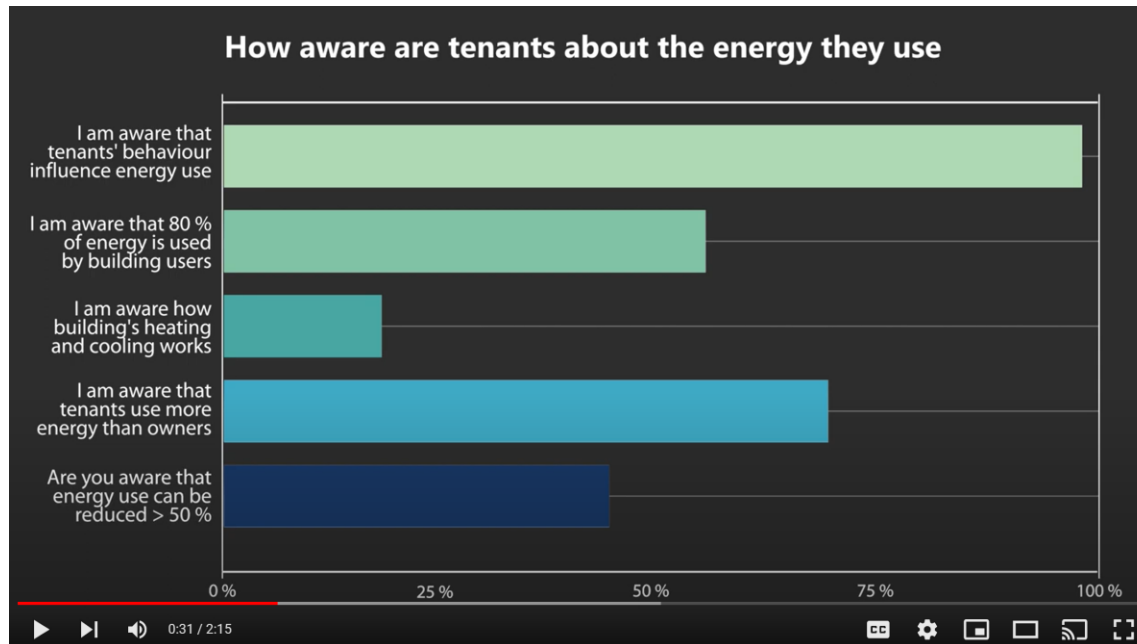


- Yes, there are many opportunities for trainings and education in the field
- There are some, but I think that market needs more
- I am not aware of any trainings in this area

- Yes, I feel that local job market offers enough skilled professionals
- There are some, but I think that market needs more
- No, I think that a significant number of skilled professionals is lacking

Main findings and best practices in the field of energy skills on EU level

3. Report from the campaign for harvesting ideas from home owners "Ask the tenants"



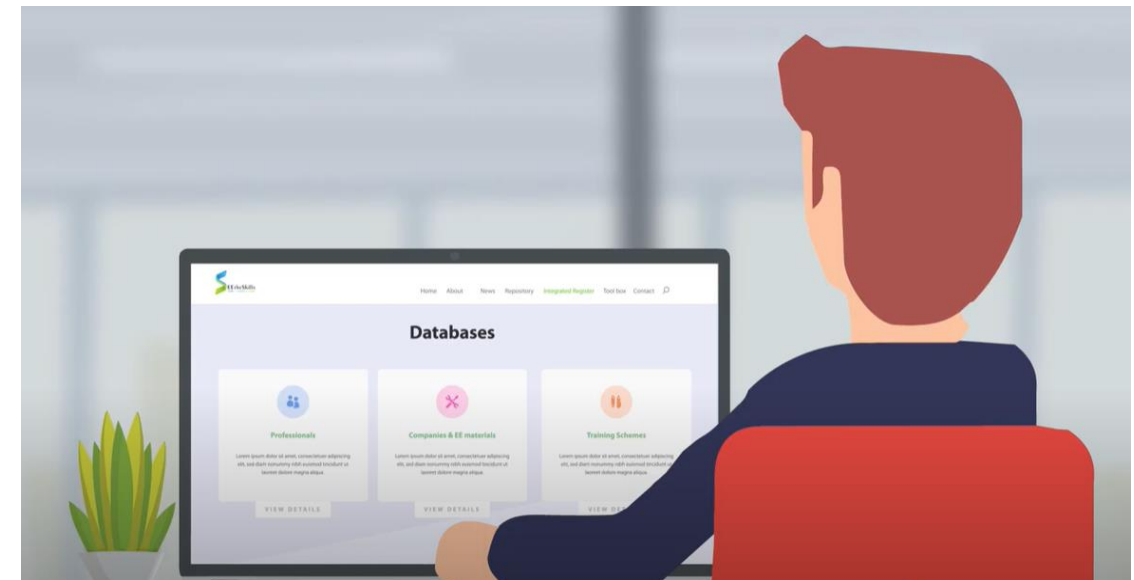
Toward realization of the utmost project result



Integrated Register of energy skills

Single spot for everything related to energy skills

- 👉 Training schemes
- 👉 Certified professionals
- 👉 Construction materials



Launching the Integrated Register of Energy skills as user-friendly web-based application available in desktop and mobile version

The Integrated Register of Energy skills is available for access to all interested professionals and companies, through the website www.seetheskills.eu.

It can be easily accessed through desktop or mobile device.



Login

Sign Up

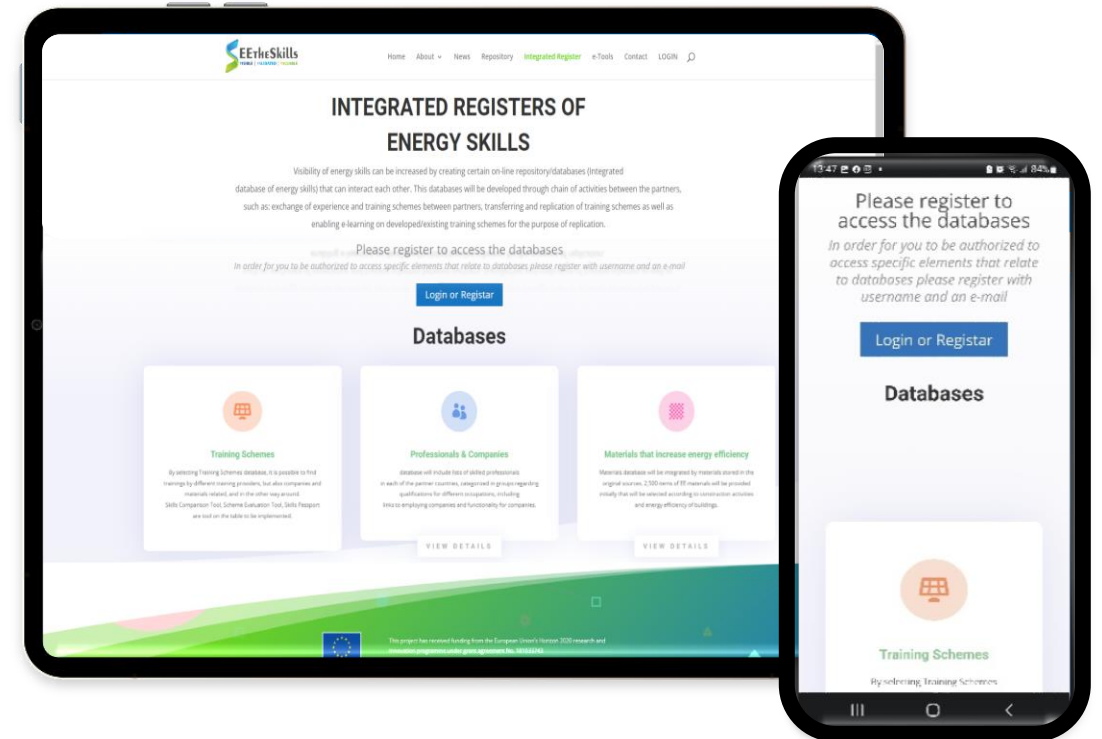
Username / Email

Password

☐ Remember me
 [Forgot Password?](#)

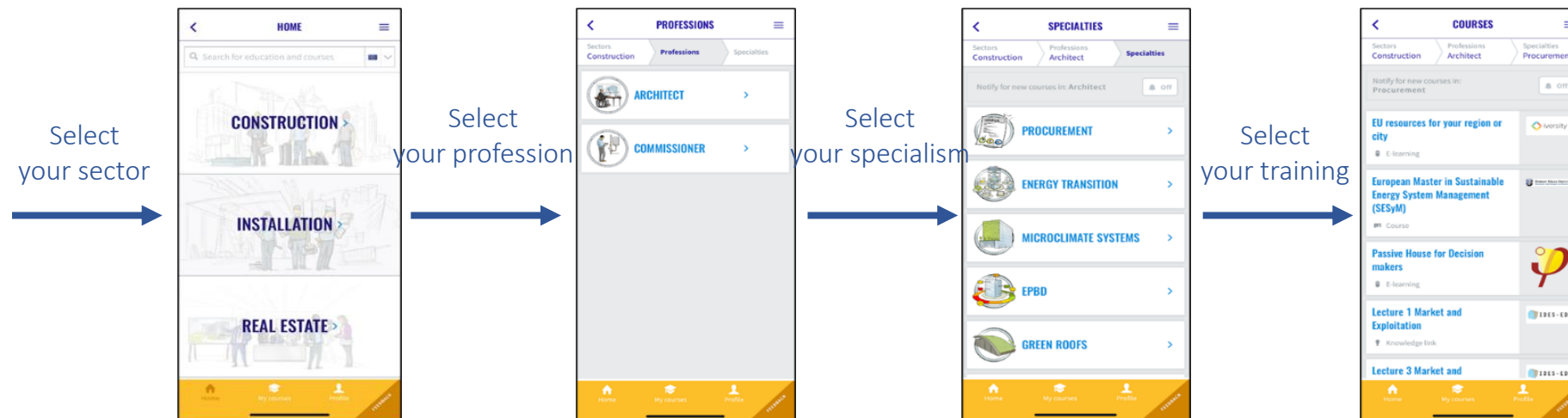
SIGN IN

Registration form



Catalogue of training schemes within the Integrated Register of Energy skills

The catalogue of training schemes is the well recognized on EU level application: **BUILD UP Skills Advisor** that aims to equip and advise the next generation of construction and installation sector workers with the knowledge and energy skills necessary to secure construction and renovation projects by digital technology. With the app, you can get good insights and update their knowledge and skills on topics such as energy savings and sustainable energy generation.



Professionals' register within the Integrated Register of Energy skills

Boosting market acceptance of skilled professionals in construction will enable harvesting direct benefits from the skills for building professionals and on-site workers, and consequently the recognition of their market value.

To achieve the visibility and to enable promotion of certified workers and professionals, **Digital Register of certified workers and trainers** is created.

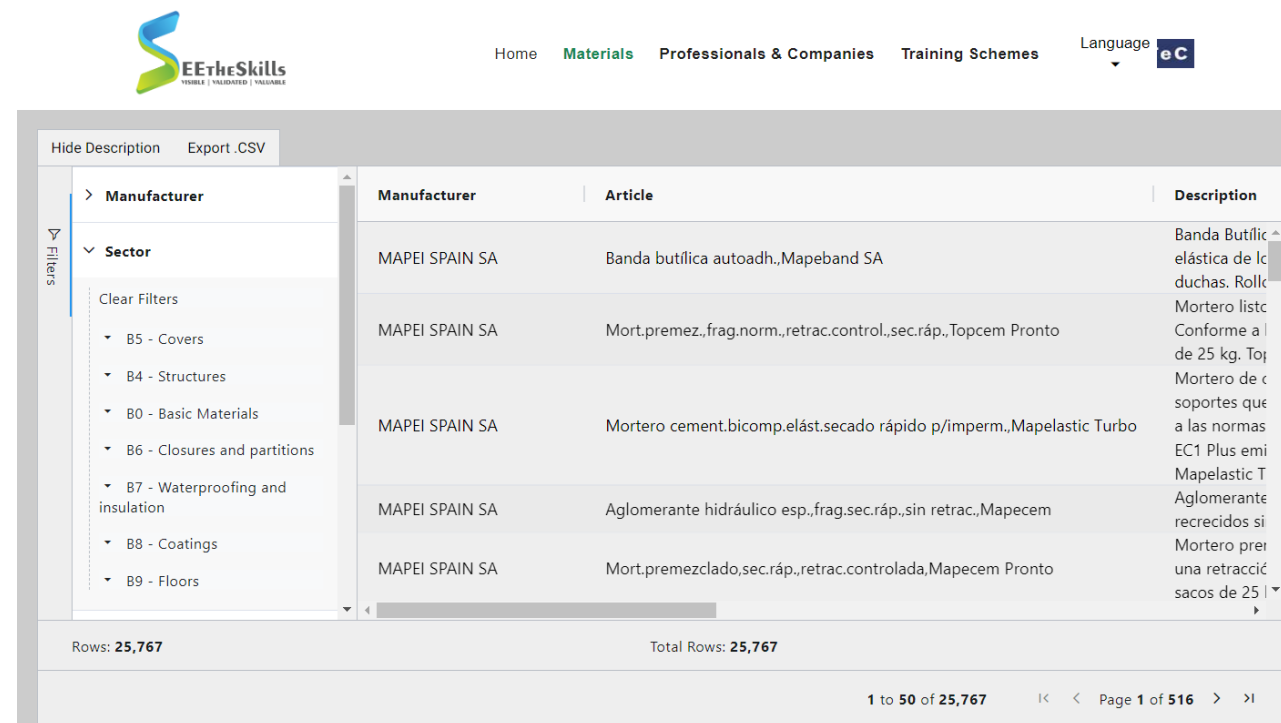


The Professionals listed in the **Professionals' register** will receive a Digital badge that will include each skills, knowledge and competence that a worker has ever gained, it will contain an information on the education of the worker in formal and non-formal form with the list of trainings, and moreover this personal skills' passport will have levelled all the achieved learning outcomes.

Database of Construction Materials within the Integrated Register of Energy skills

SEETheSkills Materials Database provides economic and environmental information regarding construction elements used in Efficient Energy actions in the construction market.

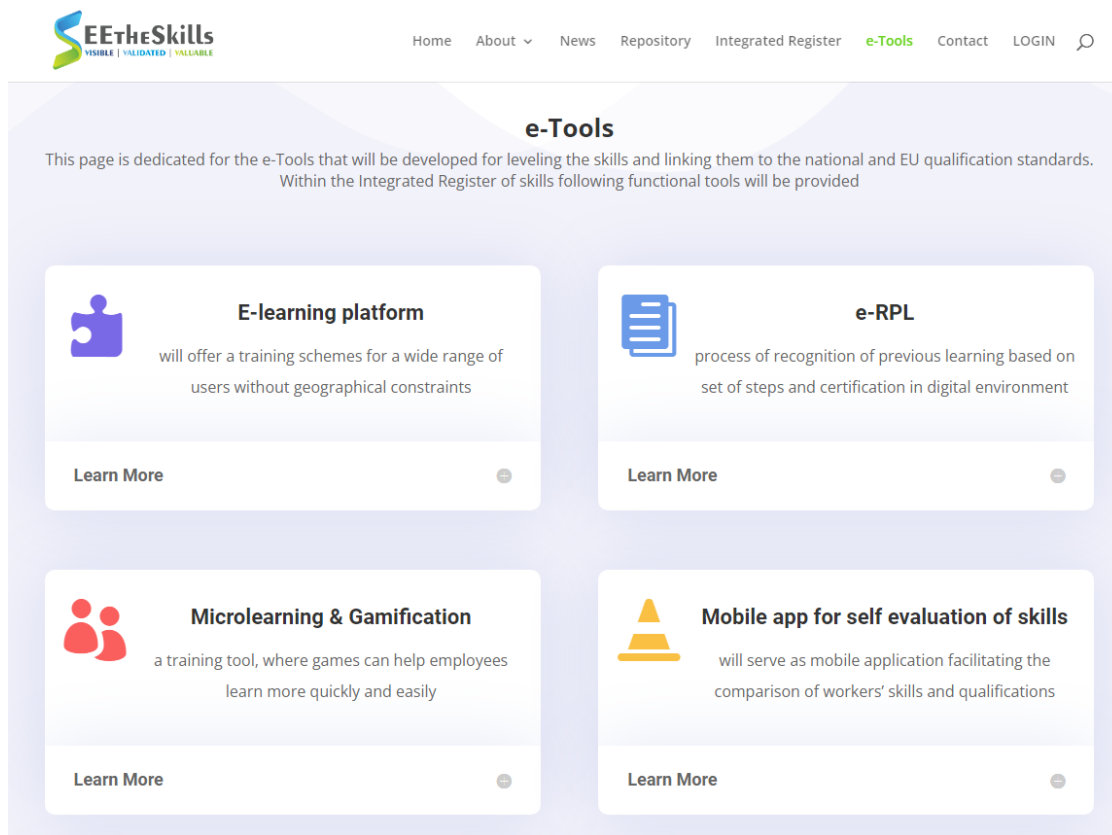
It brings a technical, environmental and economic information regarding all kind of elements used in each phase of construction, including the level of their greenness and listed necessary skills to be incorporated in the buildings.



The screenshot shows the SEETheSkills Materials Database interface. At the top, there is a navigation bar with the SEETheSkills logo, a home button, and links to Materials, Professionals & Companies, Training Schemes, and a language dropdown. Below the navigation bar, there is a table with columns for Manufacturer, Article, and Description. The table is filtered by Sector, with a list of filters on the left: B5 - Covers, B4 - Structures, B0 - Basic Materials, B6 - Closures and partitions, B7 - Waterproofing and insulation, B8 - Coatings, and B9 - Floors. The table shows 5 rows of data, all from MAPEI SPAIN SA. The bottom of the interface shows the total number of rows (25,767) and the current page (1 of 516).

Manufacturer	Article	Description
MAPEI SPAIN SA	Banda butílica autoadh.,Mapeband SA	Banda Butílic elástica de lanchas. Rollos
MAPEI SPAIN SA	Mort.premez.,frag.norm.,retrac.control.,sec.ráp.,Topcem Pronto	Mortero listo Conforme a l de 25 kg. Top
MAPEI SPAIN SA	Mortero cement.bicomp.elást.secado rápido p/imperm.,Mapelastic Turbo	Mortero de c soportes que a las normas EC1 Plus emi Mapelastic T
MAPEI SPAIN SA	Aglomerante hidráulico esp.,frag.sec.ráp.,sin retrac.,Mapecem	Aglomerante recrescidos si
MAPEI SPAIN SA	Mort.premezclado,sec.ráp.,retrac.controlada,Mapecem Pronto	Mortero pre una retracció sacos de 25

Different functionalities and e-Tools within the Integrated Register of Energy skills



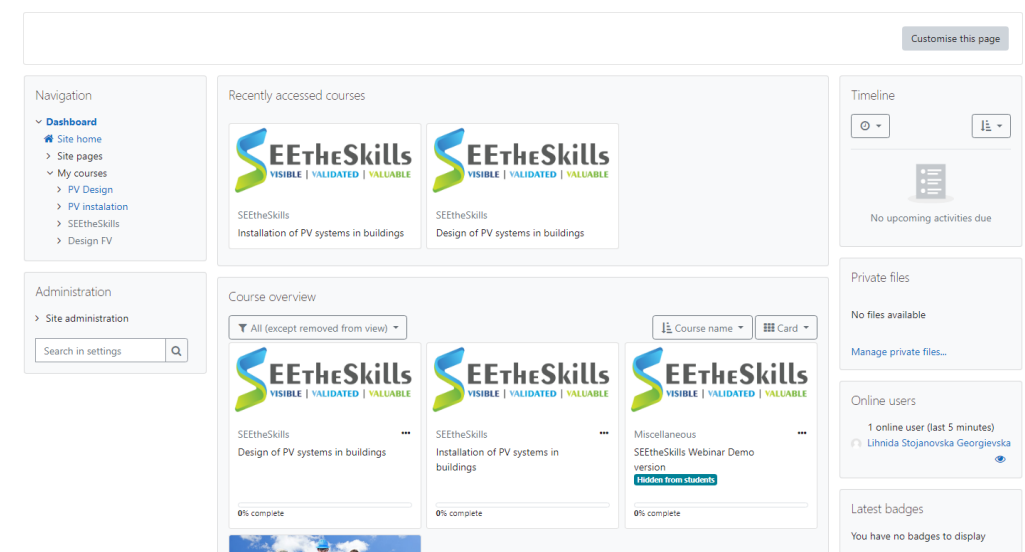
- e-learning platform for organising webinars/trainings
- e-RPL tool for digitalization of the process of recognition of prior learning
- microlearning and gamification tools for upskilling
- mobile app for self-assessment of skills by workers
- Digital badge for professionals from the Professionals register
- POE (post occupation evaluation) web tool for owners
- “Find your craftsman” functionality, automatically launched for users of POE web tool as proposed solution for improvement of energy performance of building

E-learning platform within the Integrated Register of Energy skills

The platform is fully accessible across all modern Internet browsers, including Internet Explorer, Edge, Chrome, Safari, Firefox, and on most devices, meaning you can learn anytime anywhere.

So what does anytime anywhere actually mean? The SEetheSkills Learning Management System (LMS) is a central on-line platform with a search feature to find the course you need in English or in national language when available. The structure is modular; you can either take the full series of courses or just those that are useful to you.

- Self guided learning - no dates and deadlines
- **Easy-to-use intuitive Moodle based platform**
- Modular trainings – selected module or a series of courses
- Full access to the training material, video presentations, assignments and direct contact to the trainer or other classmates



Content of E-learning platform within the Integrated Register of Energy skills

Available micro learning pieces on SEetheSkills e-learning platform:

Installation of PV systems in buildings

Design of PV systems in buildings

BIM Certification vs Certification in BIM

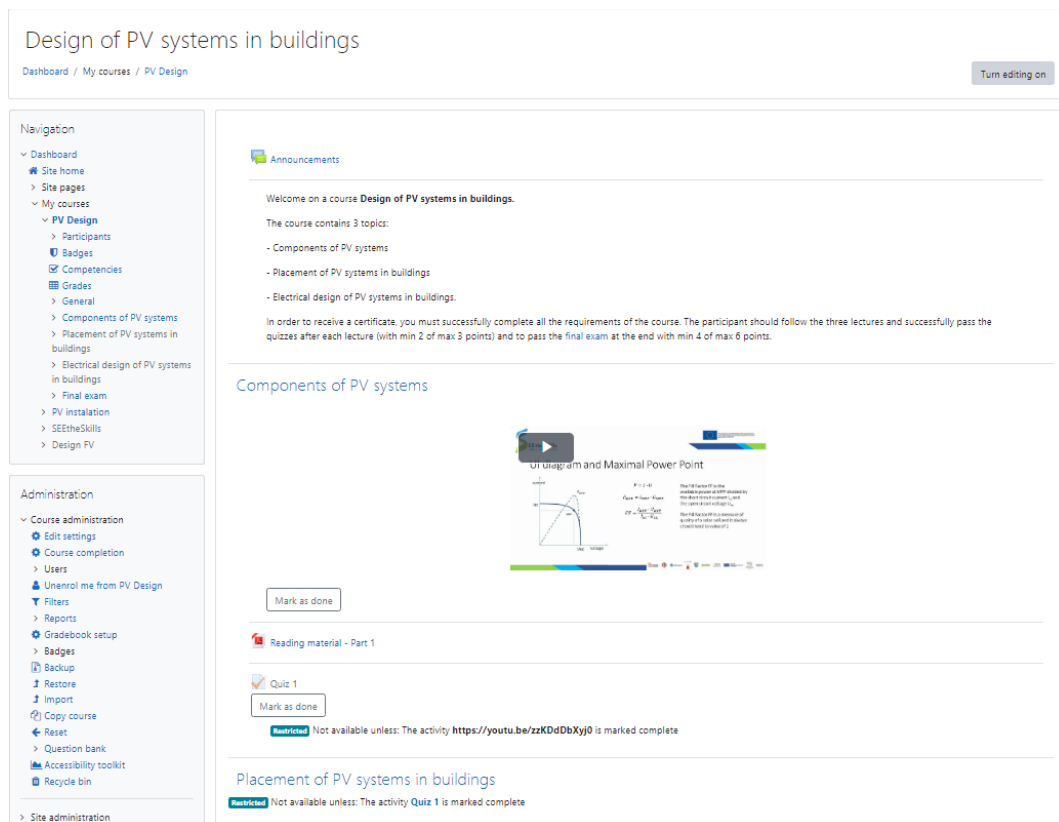
BIM skills – Necessary skills in Construction 4.0

Effective data collection for digitization of existing assets

Effective coordination and clash-detection processes in pre-construction phase

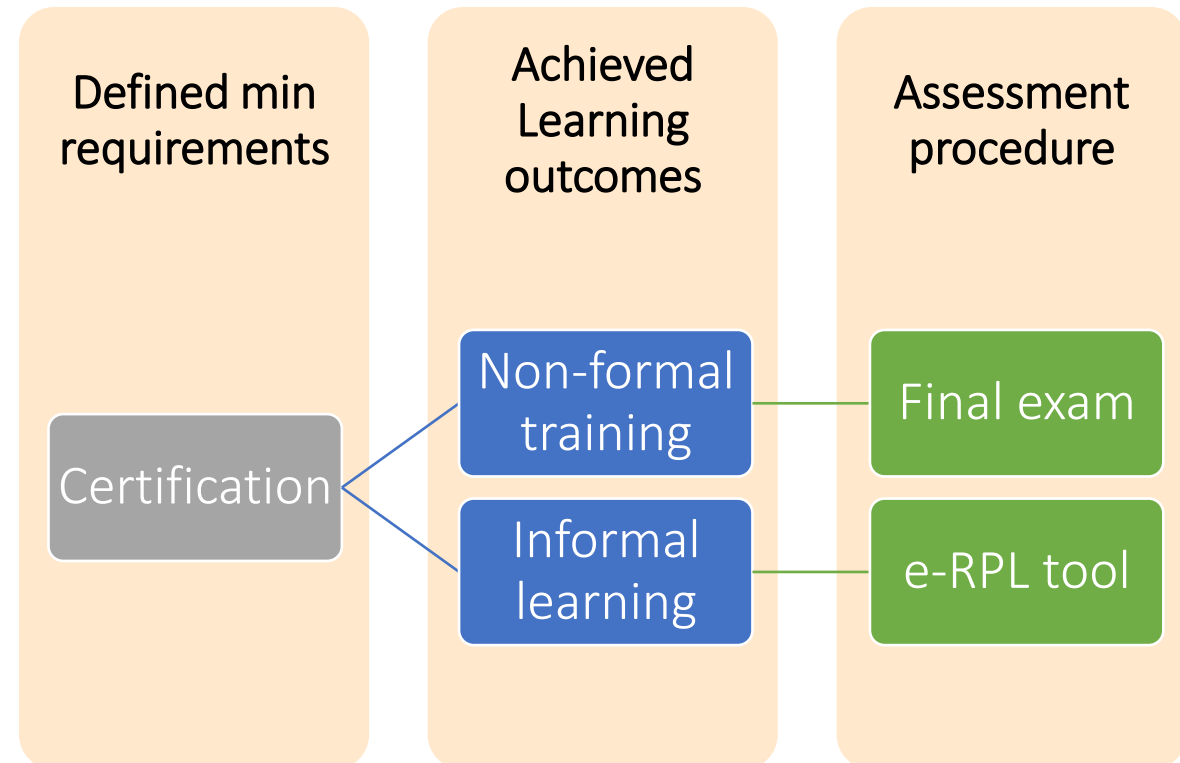
Cross-craft skills influence to optimization of radiant heating and cooling

The influence of cross-craft collaboration in the design phase to potential defects during construction and operation of the building



The screenshot shows the SEetheSkills e-learning platform interface. The top navigation bar includes 'Dashboard / My courses / PV Design' and a 'Turn editing on' button. The left sidebar contains 'Navigation' (Dashboard, Site home, Site pages, My courses, PV Design, Participants, Badges, Competencies, Grades, General, Components of PV systems, Placement of PV systems in buildings, Electrical design of PV systems in buildings, Final exam, PV installation, SEetheSkills, Design PV) and 'Administration' (Course administration, Edit settings, Course completion, Users, Unenrol me from PV Design, Filters, Reports, Gradebook setup, Badges, Backup, Restore, Import, Copy course, Reset, Question bank, Accessibility toolkit, Recycle bin, Site administration). The main content area shows 'Announcements' with a welcome message and course topics: 'Components of PV systems', 'Placement of PV systems in buildings', and 'Electrical design of PV systems in buildings'. Below this is a video player for 'PV diagram and Maximal Power Point' and a 'Quiz 1' section. The bottom section is titled 'Placement of PV systems in buildings'.

Certification available within the Integrated Register of Energy skills



The value of energy skills – set as the basestone of sustainable construction

The link between energy skills and the quality of construction can be easily presented by conducting case studies for measuring reduction of performance gap



Proper implementation of proposed EE measures
with SKILLED workers

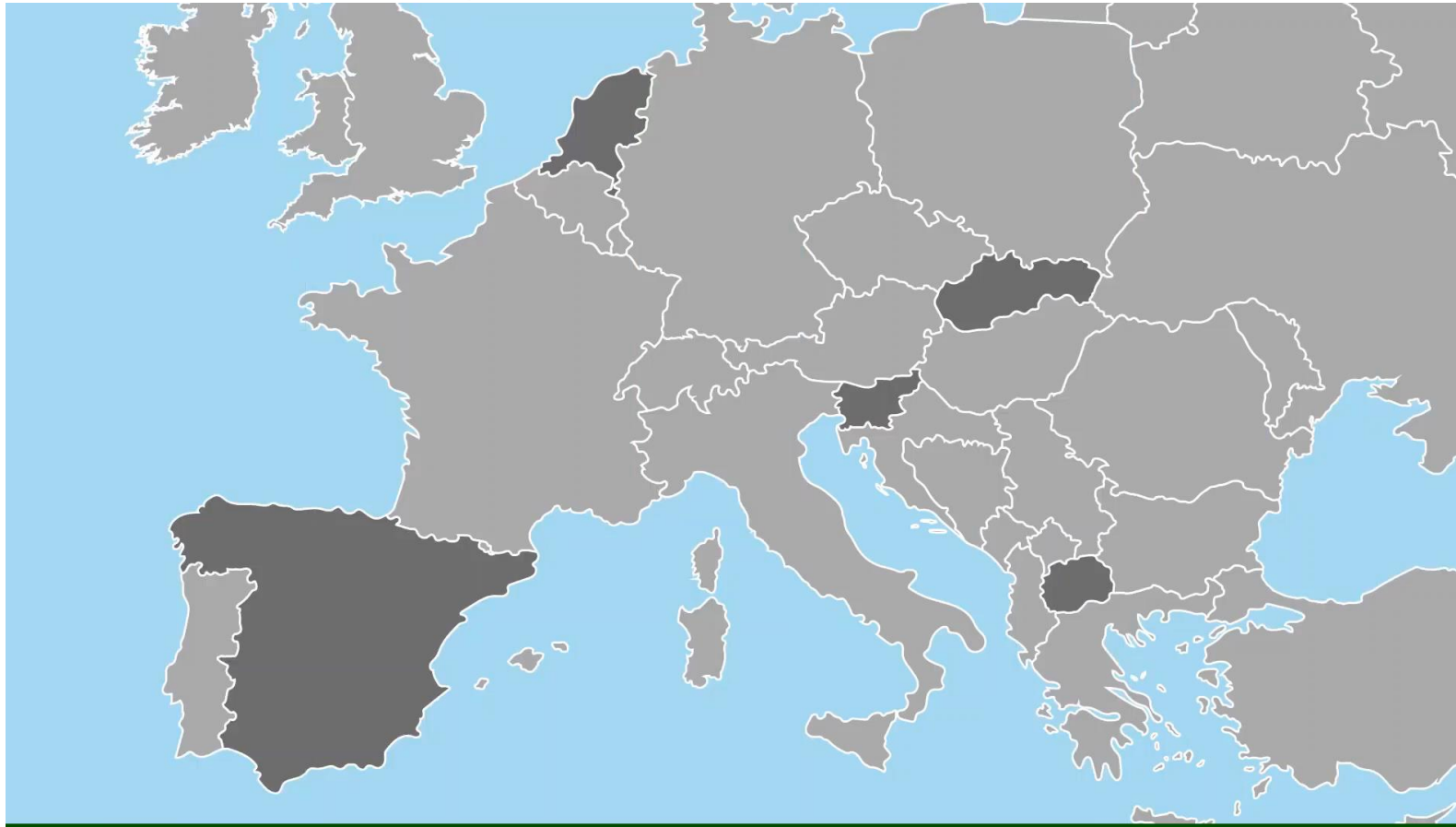
proper insulation,
avoiding thermal bridges,
proper installation of dwellings,
integration of RES in buildings
sustainable design

Measurable energy savings

buildings' assessment by
using BIM tools

Promotion of the **value**
of energy skills

Follow us and visit SEetheSkills Integrated Register of energy skills
– the platform that unlocks the potential of skills toward sustainable construction



Thank you



www.seetheskills.eu



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